EGS10: Three Days in the Life of EDAAC Overall Test Plan

sapplebee@gblt.inmet.com

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Three Days in the Life of EDAAC Overall Test Plan: E-EGS10

Overview and Scope:

The Three Days in the Life of EDAAC Overall Test Plan test (E-EGS10) is one of the EGS System level tests. It aims to demonstrate the readiness of the EDC DAAC to:

a) Ingest and archive Level2G MODIS data.
b) Generate and distribute the Level 3 and Level 4 MODIS science data products.
c) Ingest, archive and distribute Landsat-7 data.[1]
d) Ingest and archive of ASTER GDS L1a/L1b data.
e) On-demand generate and distribute higher level ASTER science data products.
f) Perform SSI&T functions for the integration of new PGEs and ESDTs.
g) Perform various system administration functions including startup, shutdown, UNIX user account management, DCE user account management, system backup and restore, network management, FTP and SMTP (e-mail).
h) Verify core infrastructure functionality including HP Open View, Tivoli, Remedy, Clear Case, DDTS, XRP-II, resource planning, and web server interface.
i) Verify ability of EDC DAAC to operate in 3 distinct modes at the **same** time, namely OPS, TS1, and TS2, without cross-mode interference.
j) Verify that ECS SDPS and the EOSDIS V0 can exchange Directory, Inventory, and Guide information; also verify browse activities and exchange of pricing / accounting information and products.

It will be conducted **after** the installation of Drop 2.0.4 and near the end of the test program **after** System Verification (SV), Acceptance Tests (AT), the Interface Confidence Tests (ICTs) and the End-to-End (ETE) tests that focus on the individual subsystems and interfaces have been run. The E-EGS10 will aim to test the key functions necessary to conduct the daily operations at the DAAC. Tests concerning SSI&T and ESDT registration will be included. The test will aim to ingest Level 1 (or other science data as relevant), needed ancillary data, and generate and archive the finished products, and test interoperability between ECS and V0, while other users are performing SSI&T, and still others are performing various system administration functions. The intent is to verify that the individual subsystems at the EDC DAAC interface with each other, with the data sources and destinations of the data products, and that the three modes (OPS, TS1, and TS2) have the ability to operate independently of each other and without interference with the other modes (with the exception of shared resources). The intent is to assess how well the DAAC functions as a whole in meeting the requirements of the science community as defined in the F&PRS document.

The scope of this test can be listed as,

- Conducted at the EDC DAAC with participation of other DAACs as necessary.
- The tests will focus on instrument threads beginning at the ingest stage and ending with the science users accessing the Level 3 and higher products using the V0 B0SOT (or available) client interface. Some of the tests will focus on the ability to integrate new PGEs and ESDTs into the system. Other tests will focus on the ability to perform various system administration and management functions. Still other tests will verify ECS and V0 interoperability.
- The tests will focus on functional capabilities. Performance will be addressed by a separate set of tests called E-EGS11.
- Only Version 2.0.4 capabilities will be considered for now. The tests can be enhanced for the additional capabilities being provided by later versions, as and when necessary.
- A representative set of scenarios, PGEs and associated ESDTs and data will be chosen for the tests in consultation with the DAAC and the ASTER, and MODIS instrument team. (The

[1] The Landsat-7 portions of the scenarios contained in this document are highlighted either in *italics* or grayed out. They will be not be run as part of the AM-1 ECS certification, but will be run at a later date prior to the scheduled Landsat-7 launch date.

representative set should exercise all functions and interfaces. It may not be possible to test all scheduled products).
- Verification of mode management capabilities.

Some of the assumptions made are:

- The interfaces between the DAAC and other elements of the EGS such as *Landsat 7*, ASTER GDS, and other DAACs are fully operational as per EOSDIS requirements.
- The DAAC is configured as per requirement and each element of the ECS at the DAAC has been tested for functionality and is operating properly. Stated explicitly, the interface tests E-ICT1, E-ICT12, and the SV/AT tests must be passed before E-EGS10 can be started.
- The Product Generation Executives (PGEs) required to produce the L3 and higher level products for the MODIS instrument are available and integrated into the DAAC configuration although these are not required for the Launch Critical Scenarios.
- The Product Generation Executives (PGEs) required to produce on-demand data products for the ASTER instrument are available and integrated into the DAAC configuration.
- Science data granules (from the instruments, where possible, or simulated) and other suitable data are available for the tests.
- The ESDTs required for these tests are defined and available in the system.
- The instrument team and the DAAC will help in selecting candidate data sets, ESDTs, and PGEs that are to be used during this test, as well as take active part during the test.
- EBnet and NSI connections to the DAAC have been qualified to EGS requirements.
- All three modes, OPS, TS1, and TS2 are operational and being utilized at the same time.

The tests which have to pass before the E-EGS10 is started are:

1. EDAAC-SCF Interface Confidence Test (E-ICT1).
2. ECS - ASTER GDS Interface Confidence Test (E-ICT12).
3. ECS to Landsat 7 Interface Confidence Test (E-ICT8).
4. MODIS End-to-End EDAAC System Test (E-ETE15).

Test Objectives:

- Test the capability of processing MODIS L2g data to generate and archive Level 3- and higher products, perform product QA, update QA metadata, and access/distribute Level 3- and higher products.
- Test the capability of processing ASTER EDS data to generate and archive L1a/L1b products, generate higher level ASTER data products on demand, and access and distribute products.
- Test the capability of Directory, Inventory, and Guide information exchange between ECS SDPS and EOSDIS V0. Also test the capability to conduct browse activities and the exchange of pricing and accounting information and products.
- Test the capability of accessing and distribution of Landsat 7 products.
- Test the capability to perform SSI&T functions while daily operations (ingest, production and archive, distribution) and system administrative and management functions are going on.
- Test the capability of the system to monitor the network, create/modify DCE users, create/modify UNIX users.
- Test the capability of the system to operate in more than one mode simultaneously.
- Test the capability of the system to handle error situations.

Test Configuration:

Hardware and software configurations at each ECS site, are managed and tracked by the M&O organization at that site. All three modes, OPS, TS1, and TS2 are operational. The most current

configuration status report will be obtained prior to the start of testing and be referenced in the test report.
Table E-EGS10-1 provides details about the planned scenarios and their order of execution. On the user side, MODIS and ASTER JPL SCF will be requested to participate in performing QA checks on the data products.

Mode	Scenario	Notes
Not Applicable	E-EGS10.1	This scenario establishes the three modes for the next three scenarios
OPS	E-EGS10.2	This scenario is run in conjunction with E-EGS10.3 and E-EGS10.4
TS1	E-EGS10.3	This scenario is run in conjunction with E-EGS10.2 and E-EGS10.4
TS2	E-EGS10.4	This scenario is run in conjunction with E-EGS10.2 and E-EGS10.3

Table E-EGS10-1. ECS EDC Scenarios and Order of Execution

Exhibit E-EGS10-1 and Table E-EGS10-2 give an idea of the configuration and data flow for this test (including ASTER test scenarios from E-EGS-9).

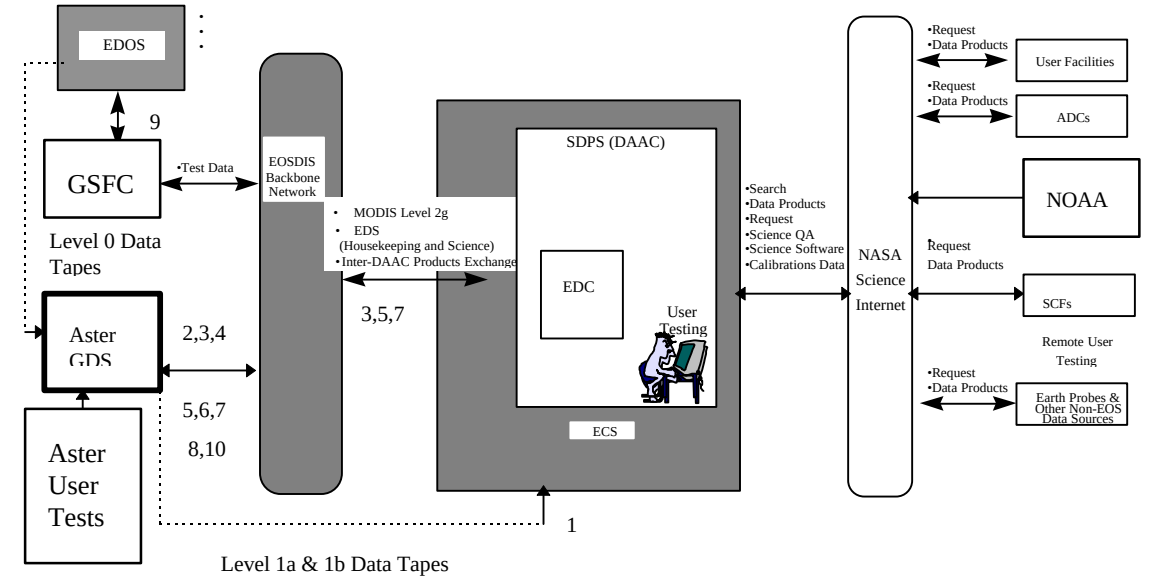


Exhibit E-EGS10-1. ECS EDC System Test Diagram

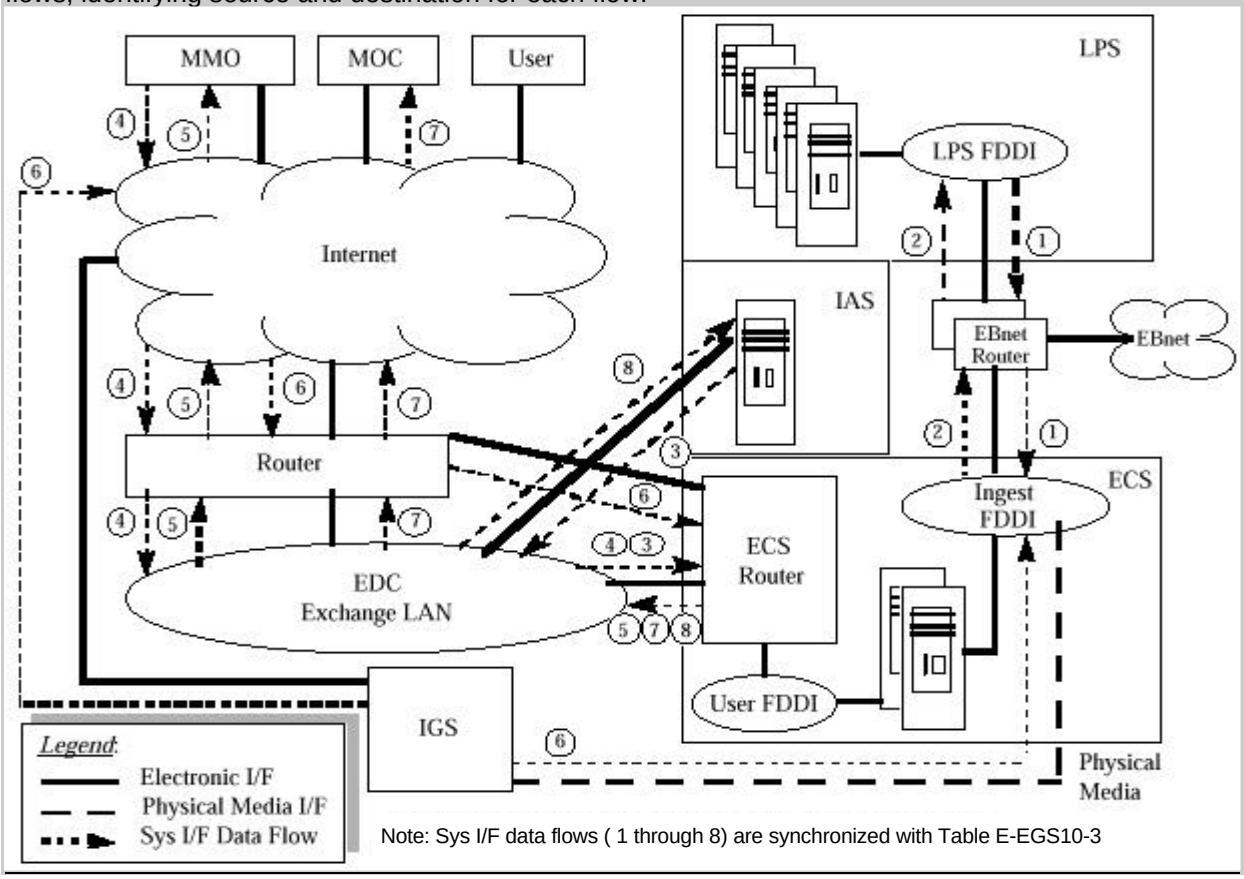
Source	Destination	System Interface Data Flows	Number[1]
ASTER GDS	EDC	Level 1A Product File Level 1B Product File Metadata Files Browse	1
ASTER GDS	EDC	Data Shipping Notice	2

Source	Destination	System Interface Data Flows	Number[1]
ECS Users Interoperability	ASTER GDS	Directory, Inventory search. Browse and product requests. Product Status Product Cancel Pricing	3
ASTER GDS Users	EDC	Directory, Inventory search. Browse and product requests. Product Status Product Cancel Pricing	4
EDC	ASTER GDS	System and Network Management	5
ASTER GDS	EDC	System and Network Management	6
ECS	ASTER GDS	DAR Search, Request, Status	7
ASTER GDS	EDC	DAR Search, Request, Status	8
EDOS	GSFC	ASTER EDSs	9
EDC	ASTER GDS	Requested EDSs	10

1. System Interface data flows are keyed to Exhibit E-EGS10-1.

Table E-EGS10-2. ECS/ASTER EDC System Science Interfaces

Exhibit E-EGS10-3 and Table E-EGS10-3 provide a list of the ECS-Landsat 7 system interface data flows, identifying source and destination for each flow.



sapplebee@gblt.inmet.com

Exhibit E-EGS10-3. ECS–Landsat 7 System Interfaces

Source	Destination	System Interface Data Flows	Number [1]
LPS	ECS	Data Availability Notice Level 0R Data Level 0R Inventory Metadata Level 0R Browse	1
ECS	LPS	Acknowledgment	2
IAS	ECS	Calibration Parameters with Metadata Update	3
MMO	ECS	Product Price Information System Management Status	4
ECS	MMO	System Management Status Statistics and Reports	5
IGSs	ECS	IGS Inventory Metadata IGS Browse	6
ECS	MOC	Level 0 Inventory Metadata	7
ECS	IAS	Level 0R Products	8
Landsat 7 [1]	ECS (Document Data Server)	Landsat 7 Guide Information and IAS Reports	See note 2

1. System Interface data flows are keyed to Exhibit E-EGS10-3
2. Landsat 7- independent data flow; outside of Landsat 7-ECS interface.

Table E-EGS10-3. ECS–Landsat 7 System Interfaces

Processes to be verified :

- DAAC System Administration and Management
- Mode Management
- Ingest and archival of MODIS Level 2g data from GSFC DAAC
- Media ingest and archival of ASTER L1a/L1bdata from ASTER GDS (D3 tape).
- Ingest and archival of Landsat 7 data.
- Ingest of ancillary data from NOAA ADC
- Automatic scheduling of PGE execution triggered by ingest of input data.
- Concurrent execution of many PGEs.
- Chaining of PGEs where the completion of one will lead to start of another.
- ECS support for advanced production rules.
- Archival of higher level products and associated metadata.
- User access to the archives (directory, guide and inventory searches, accessing browse products, specify exactly which data is desired, place orders for data).
- ECS SDPS and EOSDIS V0 interoperability
- Data manipulation and distribution.
- Recovery from hardware/software failures during execution of a PGE.
- SSI&T for new or updated PGEs

- Addition / modification of ESDTs

Participants and support requirements:

- DAAC personnel (details TBD)
- Science users and instrument team members if possible. (Testers and ops personnel can act as science users to the extent possible)(details TBD)
- EOC support for orbit and attitude data
- Support from other DAACs where relevant (for example, MODIS L2g data subscription push from GSFC DAAC that is needed for Level 3 data production at EDC)
- NOAA ADC support for ancillary data via the Data Link Server at GSFC
- EBnet support for data transfer
- NASA Science Internet support for science user interface (requests, data products)

Equipment and Software:

TBD

Test Tools:

TBD

Test Data:

TBD

E-EGS10-1 Scenario 1 - E-LC11, System Administration

This scenario exercises 1) the ability to manage the DCE cell for the EDAAC ECS including the exercise of add, delete and edit capabilities; 2) management of UNIX user accounts; and 3) other system management, system network, and system administrative capabilities; 4) monitor of error logs in an integrated fashion. This scenario is exercised prior to and includes the startup of the OPS, TS1, and TS2 modes in support of Scenarios 2-4.

Requirements To Be Verified:

TBD

Test Objectives:

- Perform system shutdown
- Perform system startup
- Manage DCE cells
- Perform Database Administration
- H/W and S/W Configuration and Usage

Methods for Results Analysis:

TBD

General Test Flow Sequence:

1. **Shutdown**
    - 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations.
        - Normal - By Subsystem; Section 3.1.2.1
            - Shutdown a Machine; Section 3.1.2.1.1
        - Emergency - By Subsystem; Section 3.1.2.2
            - Abnormal, *No applicable Section*
        - Server - By Server Software; Section 3.1.2.3

2. **Startup**
    - 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations.
        - Cold; Section 3.1.1.1
        - Warm; Section 3.1.1.2
            - Three modes - OPS, TS1 & TS2 - use ECS Assist / HP OpenView to start servers
            - ECS Assistant; Section 3.7
                - Using ECS Assistant to Start Up/ Shut Down Servers; Section 3.7.2
                - Using ECS to Perform System Monitoring; Section 3.7.3
                    - Using ECS Assistant to Open/ View Log Files for a Selected Server; Section 3.7.3.1
                    - Using ECS Assistant to Monitor Server Status; Section 3.7.3.2

3. **DCE Cell Management** [2]

[2] It is our understanding that the various operational servers will perform DCE logins as necessary and individual logins by users will not be permitted. Since DCE cell management will have been performed as part of the software install, no further management of DCE is necessary, with the exception of verifying the current status of DCE.

- 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations.
  - DCE Configuration[3]; Section 3.6
    - Configuring Initial Cell; Section 3.6.1
    - Configuring DTS Servers; Section 3.6.2
    - Configuring Additional CDS Servers; Section 3.6.3
    - Configuring Security and CDS Client Systems; Section 3.6.4
    - Configuring DTS Clerks; Section 3.6.5
    - Configuring GDA Servers; Section 3.6.6
    - Creating Security Server Replica; Section 3.6.7
    - Unconfiguring DCE Client; Section 3.6.8
  - Verify DCE up and running
    - use command dce.ps or dce_login
    - CDS Browser

4. Database Administration

- 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations.
  - Starting, Stopping, and Showing the Server(s); Section 4.4.1
  - Creating Logical Devices[4]; Section 4.4.2
  - Creating and Altering Databases[3]; Section 4.4.3
  - Data Placement - Segmentation[3]; Section 4.4.4
  - Monitoring Space Usage; Section 4.4.5
    - Thresholds; Section 4.4.5.1
  - Creating Database Objects[3]; Section 4.4.6
  - Creating and Managing Users Logins; Section 4.4.7
  - Permissions; Section 4.4.8
  - Backup and Recovery; Section 4.5
    - Automatic Backups; Section 4.5.1
    - Manual Backups; Section 4.5.2
    - Manual Recovery; Section 4.5.3
    - The BulkCopy Utility; Section 4.5.4
      - Requirements for Using bcp; Section 4.5.4.1
      - bcp Syntax; Section 4.5.4.2
      - bcp Scripts and Files; Section 4.5.4.3
  - Database Performance and Tuning; Section 4.6
  - Installation of the Applications[3]; Section 4.7
    - Installation of the Application Databases; Section 4.7.1
    - The AUTOSYS Application and other Configuration Issues; Section 4.7.2
    - Spatial Query Server (SQS) ; Section 4.7.3

5. H/W and S/W Configuration and Usage

- H/W Configuration [3,5] - This is already verified since there are SUN workstations, HP workstations, SGI workstations, and NCD workstations installed and operating on the system.
  - 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations.
    - Installing a New Workstation; Section 3.5
      - Preparation; Section 3.5.1
        - Hardware Preparation; Section 3.5.1.1

[3] The 611-CD-004-002 document referenece is provided here for information only. It is not intended that any of the functions decribed in the 611-CD-004-002 document be performed as part of this test.
[4] It is not anticipated that this will actually be performed. The fact that SYBASE is installed and running, and the various databases and tables are accessible is sufficient to satisfy this test.
[5] The previous installation and operation of various workstations satisfies this capability.

        - Network Configuration; Section 3.5.1.2
    - Installation; Section 3.5.2
        - Hardware; Section 3.5.2.1
            - Reporting to Inventory; Section 3.5.2.1.1
        - Operating System Installation - By Operating System Type; Section 3.5.2.2
            - Solaris 2.5.1 Operating System Installation; Section 3.5.2.2.1
            - HP-UX 10.01 AND 10.10 Operating System Installation; Section 3.5.2.2.2
            - IRIX 6.2 Operating Systems Installation; Section 3.5.2.2.3
            - NCD Operating System Installation; Section 3.5.2.2.4

- S/W Configuration[3,6]- This is already verified since the COTS S/W (SYBASE, Autosys, HP Open View, Tivoli, Remedy, Clear Case, DDTS, Netscape, XRP-II etc.) has been installed and configured. The operation of some of these COTS is verified in Scenario 4 sequence 7.
    - 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations.
        - Installation; Section 3.5.2
            - Software; Section 3.5.2.3
                - Custom; Section 3.5.2.3.1
                - COTS; Section 3.5.2.3.2
        - Testing and Verification; Section 3.5.3
            - Reboot; Section 3.5.3.1
                - SGI, HP and Sun; Section 3.5.3.1.1
                - NCD; Section 3.5.3.1.2
            - Logging In; Section 3.5.3.2
            - Test Environment; Section 3.5.3.3
        - SQL Server Installation; Section 4.3

E-EGS10-2 Scenario 2 - E-LC-13, Mode Management, E-LC-4, Request Level Order Tracking (OPS Production Request Tracking), E-LC-6, Data Staging for FTP, E-LE-2 Full Daily Ingest of MODIS L2g via EBnet from GDAAC, E-LE-8 MODIS Routine Processing.

[6] See Core Infrastructure and Systems Management (E-LC-16) test scenario in TS-2 mode.

This scenario exercises the use of mode management to conduct operations, SSI&T activities, and system administration and management activities simultaneously. This scenario also exercises the ability of EDAAC ECS to track order requests at a high level (granule level tracking is not LC during this time period). Additionally, this scenario exercises EDAAC ECS data set-up for FTP pickup. This scenario verifies ECS SDRP and EOSDIS Version 0 interoperability. Also included in this scenario are launch essential scenarios to exercise the full volume ingest of MODIS L2g products and the planning and processing of MODIS L2g data, including the retrieval and staging of ancillary data from the Data Server and the archival of processed MODIS data in EDAAC ECS, **This scenario is intended to be run simultaneously with Scenario 3 and Scenario 4.** Together, these three scenarios demonstrate the ability to run in one mode without interference from the other modes. This scenario is intended to be run in the 'OPS' mode.

Requirements To Be Verified:

TBD

Test Objectives:

- Perform ingest of ASTER data (E-EGS9 Scenario 1)
- Perform ingest of Landsat 7 data (E-EGS5 Test E-EGS5.01, E-EGS5.02, E-EGS5.03, E-EGS5.04)
- Perform ingest of MODIS Level 2g data (E-EGS15)
- Perform archive of ASTER data (E-EGS9 Scenario 1)
- Perform archive of Landsat 7 data (E-EGS5 Test E-EGS5.01, E-EGS5.02, E-EGS5.03, E-EGS5.04)
- Perform archive of MODIS Level 2g data (E-EGS15)
- Perform data production of Level 3 and Level 4 MODIS data products (E-EGS15)
- Perform archive of Level 3 and Level 4 MODIS data products (E-EGS15)
- Perform data production of ASTER science data on-demand (E-EGS9 Scenario 6, Scenario 7)
- Perform request level order tracking (E-EGS15, E-EGS9)
- Perform data staging for FTP pickup (E-EGS15, E-EGS9)

Methods for Results Analysis:

TBD

General Test Flow Sequence:

1. **Ingest**
    - 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations.
        - ASTER - See E-EGS9.1 Scenario 1
        - Landsat - See E-EGS5.02
        - MODIS - See E-EGS15.2

2. **Archive**

    - 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations.
        - ASTER - See E-EGS9.1 Scenario 1
        - Landsat - See E-EGS5.02
        - MODIS - See E-EGS15.2

3. **Data Production**

    - No 611-CD-004-002 reference. See E-EGS15.2 for MODIS

4. Request Level Order Tracking (OPS Production Request Tracking)

- No 611-CD-004-002 reference. See E-EGS15.2 for MODIS

5. Data Staging for FTP - Data Distribution

- No 611-CD-004-002 reference. See E-EGS15.2 for MODIS

E-EGS10-3 Scenario 3 - E-LC-13, Mode Management, E-LC-12, Addition/Modification, and Search, and Distribution of a ESDT, E-LC-9, Full ASTER SSI&T, and E-LC-10, Full MODIS SSI&T.

This scenario exercises the use of mode management to conduct operations, SSI&T activities, and system administration and management activities simultaneously. For MODIS, this scenario exercises : 1) the delivery and use of science algorithms/software; 2) delivery, inspection and infusion testing of MODIS PGEs and associated test data; 3) integration testing of MODIS PGEs to include chaining for higher level products; 4) commissioning of the MODIS PGEs into operations using actual MODIS data from EOS AM-1; and 5) support PGE changes and modifications to include testing, insertion and production monitoring.
For ASTER, this scenario exercises: 1) the delivery and use of science algorithms/software; 2) delivery, inspection and infusion testing of ASTER PGEs and associated test data; 3) integration testing of V2 ASTER PGEs to include chaining for higher level products; 4) commissioning of V2 ASTER PGEs into operations using actual ASTER data from EOS AM-1; 5) support PGE changes and modifications to include testing, insertion and production monitoring; 6) NOAA ancillary data access; and 7) DEM ingest. It is anticipated that a subset of the SSI&T portion of this scenario will be running at any given moment in time, and that multiple runs of this scenario will adequately cover all aspects of the SSI&T process. **This scenario is intended to be run simultaneously with Scenario 2 and Scenario 4.** Together, these three scenarios demonstrate the ability to run in one mode without interference from the other modes. This scenario is intended to be run in the 'TS1' mode.

Requirements To Be Verified:

TBD

Test Objectives:

- Evaluation of proposed ESDTs using EDAAC ECS test mode
- Commission of new ESDTs into operations
- Search of all ESDT data types in EDAAC ECS using the ECS Client
- Order of a sample of each ESDT using the Client
- Distribution of samples via pull ftp, push ftp, and 8 mm tape
- Inspection of samples using Client and other HDF inspection tools
- To verify the ability to ingest PGEs into the system from the SCFs.
- To verify the ability to check that the code shipped is compatible with the EDAAC system.
- To verify the ability to chain PGEs.
- To verify the ability to commission the PGEs into operations using actual MODIS or ASTER data as applicable.
- To verify the ability support PGE changes and modifications.

Methods for Results Analysis:

TBD

General Test Flow Sequence:

1. **ESDTs**
    - 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations.
        - ASTER - See E-EGS9-2 Scenario 2
        - MODIS - See E-EGS15.1
2. **SSI&T**

- 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations. Note that not all of the SSI&T operations will be performed every time the scenario is run. This will depend on the various SSI&T activities currently ongoing in the TS1 mode.
    - ASTER - See E-EGS9-2 Scenario 2
    - MODIS - See E-EGS15.1

E-EGS10-4 Scenario 4 - E-LC-13, Mode Management, E-LC-11, System Administration, E-LC-16, Core Infrastructure and Systems Management

This scenario exercises the use of mode management to conduct operations, SSI&T activities, and system administration and management activities simultaneously. This scenario exercises: 1) management of UNIX user accounts; and 2) other system management, system network, and system administrative capabilities; 3) monitor of error logs integrated fashion. Additionally, this scenario exercises: 1) use of monitoring resource tools (HP Openview and Tivoli), 2) using system problem reporting tools; 3) use of trouble reporting tools (Remedy); 4) use of configuration management tools (DDTS); 5) use of resource planning tools; and 6) web/mail server interface. **This scenario is intended to be run simultaneously with Scenario 2 and Scenario 3.** Together, these three scenarios demonstrate the ability to run in one mode without interference from the other modes. This scenario is intended to be run in the 'TS2' mode.

Requirements To Be Verified:

TBD

Test Objectives:

- Management of UNIX user accounts.
- Verification of other system management responsibilities.
- Management of system network.
- Verification of system administrative capabilities
- Monitoring of error logs integrated fashion.
- Verify operation of monitoring resource tools (HP Openview and Tivoli)
- Verify operation of system problem reporting and trouble reporting tools (Remedy)
- Verify operation of configuration management tools (DDTS)
- Verify operation of resource planning tools
- Verify operation of web server interface

Methods for Results Analysis:

TBD

General Test Flow Sequence:

1. **TCP/IP**
    - 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations.
        - FTP; 11.5.1.1 Acquiring the DAP via FTP
        - SMTP (e-mail), *No applicable Section*

2. **Resource Planning**
    - 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations.
        - Resource Planning Workbench Utility; Section 12.2
            - Create a Resource Reservation Request; Section 12.2.1
                - Selecting Resources... ; Section 12.2.1.1
                - Selecting Frequency; Section 12.2.1.2
                - Selecting Intervals... ; Section 12.2.1.3
            - Edit a Resource Reservation Request; Section 12.2.2
            - Validate or Reject a Resource Reservation Request; Section 12.2.3

- Approve a Resource Reservation Request; Section 12.2.4
- Commit a Resource Reservation Request; Section 12.2.5
- Review Resource Timeline; Section 12.2.6
- Delete a Resource Reservation Request; Section 12.2.7

- Resource Definition Tool; Section 12.3
  - Add a Resource; Section 12.3.1
    - Autosys Resource Definition Screen; Section 12.3.1.1
    - Computer Resource Definition Screen; Section 12.3.1.2
    - Disk Partition Resource Definition Screen; Section 12.3.1.3
    - Hardware Resource Definition Screen; Section 12.3.1.4
    - Real Computer Resource Definition Screen; Section 12.3.1.5
    - String Resource Definition Screen; Section 12.3.1.6
  - Modify a Resource; Section 12.3.2
  - Delete a Resource; Section 12.3.3
  - Synchronize Resource Listings; Section 12.3.4

3. System Backup and Restore

- 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations.
  - System Backup and Restore; Section 3.2
    - Incremental Backup; Section 3.2.1
    - Full Backup; Section 3.2.2
    - File Restore; Section 3.2.3
    - Complete System Restore; Section 3.2.4
    - Tape Handling; Section 3.2.5
      - Indexing Tapes; Section 3.2.5.1
      - Labeling Tapes; Section 3.2.5.2
  - Archive Data Backup; Section 17.7
    - AMASS Database Backup; Section 17.7.1
      - AMASS Automated Backup; Section 17.7.1.1
      - AMASS Manual Backup; Section 17.7.1.2
      - AMASS Database Manual Restore; Section 17.7.1.3
    - ACSLS Database Backup and Restore; Section 17.7.2
      - ACSLS Database Backup Script; Section 17.7.2.1
      - ACSLS Database Restore Script; Section 17.7.2.2
    - Backing Up Archive Data; Section 17.7.3
      - Generate List of Data to be Backed Up; Section 17.7.3.1
      - Creating AMASS Local Backup Tapes; Section 17.7.3.2
      - Creating AMASS Off-Site Backup Tapes; Section 17.7.3.3
    - Media Quality Control; Section 17.7.4
      - Cleaning Cartridges; Section 17.7.4.5
  - Archive Data Recovery/Restoration; Section 17.8
    - Use of Backup Data for Recovery; Section 17.8.1
    - Manual Data Recovery from Local Backup Tapes; Section 17.8.3
    - Manual Data Recovery from Off-Site Backup Tapes; Section 17.8.4
    - Manual Data Recovery From Damaged Cartridge; Section 17.8.5
  - Operations of Archive Media Interfaces; Section 17.9
    - STK Media Interface; Section 17.9.1
      - Manual Insertion of STK Media; Section 17.9.1.1
        - Insertion of STK Media Using Bulkload; Section 17.9.1.1.1
        - Insertion of STK Media Using Bulkinlet; Section 17.9.1.1.2
      - Automatic Insertion of STK Media; Section 17.9.1.2
      - Manual Ejection of STK Media; Section 17.9.1.3

- Commanding Ejection of STK Media; Section 17.9.1.3.1
- Manually Removing STK Media From the Powderhorn LSM; Section 17.9.1.3.2

- EMASS Media Interface Units17.9.2
  - Inserting Media into the EMASS EIF; Section 17.9.2.1
  - Automatically Loading EMASS Archive Media; Section 17.9.2.2
  - Manually Loading EMASS Archive Media; Section 17.9.2.3
  - Removing EMASS Archive Media; Section 17.9.2.4
  - Ejecting Media from the EMASS EIF; Section 17.9.2.6
  - Removing Problem Media from the EMASS EIF; Section 17.9.2.7
- EMASS I/O UNIT; Section 17.9.3
  - Inserting Media into the EMASS I/O UNIT; Section 17.9.3.1
  - Ejecting Media into the EMASS I/O UNIT; Section 17.9.3.2
  - Removing Problem Media from the EMASS I/O UNIT; Section 17.9.3.3

4. Management of UNIX User Accounts

- 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations.
  - User Administration; Section 3.4
    - Adding a User; Section 3.4.1
    - Deleting a User; Section 3.4.2
    - Changing a User Account Configuration; Section 3.4.3
    - Changing User Access Privileges; Section 3.4.4
    - Changing a User Password; Section 3.4.5
    - Checking a File/Directory Access Privilege Status; Section 3.4.6
    - Changing a File/Directory Access Privilege Status; Section 3.4.7
    - Moving a User's Home Directory; Section 3.4.8

5. Error Logs

- No 611-CD-004-002 reference.

6. Network

- 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations.
  - HP Open View Network Node Manager (NNM); Section 6.1
    - Starting Network Node Manager (NNM) Section 6.1.1
    - Creating Additional Objects; Section 6.1.2
      - Adding a Network Object; Section 6.1.2.1
      - Adding a Segment Object; Section 6.1.2.2
      - Adding a Node Object; Section 6.1.2.3
      - Adding an IP Interface Object; Section 6.1.2.4
    - Viewing Current Network and System Configuration; Section 6.1.3
    - Viewing Network Address Information; Section 6.1.4
    - Viewing How Traffic is Routed on a Network; Section 6.1.5
    - Viewing the Services Available on a Node; Section 6.1.6
  - Checking the Health and Status of the Network; Section 7.1
    - Starting NNM (Network Node Manager); Section 7.1.1
    - Verify That an Object Is Not Functioning; Section 7.1.2
    - Looking at Maps for Color Alerts; Section 7.1.3
    - Looking at Maps for New Nodes; Section 7.1.4
    - Creating Special Submaps for Monitoring Status; Section 7.1.5
    - Checking for Event Notifications; Section 7.1.6

- Rediscovering the Network; Section 7.1.7

7. Core Infrastructure and Systems Management

- 611-CD-004-002 reference. The following procedures describe the operations for running the various steps necessary during operations.
  - HP Open View[7]
  - Tivoli
    - System Log Maintenance; Section 3.3
    - User Administration; Section 3.4
      - Adding a User; Section 3.4.1
      - Deleting a User; Section 3.4.2
      - Changing a User Account Configuration; Section 3.4.3
      - Changing User Access Privileges; Section 3.4.4
      - Changing a User Password; Section 3.4.5
      - Moving a User's Home Directory; Section 3.4.8
    - Tivoli Enterprise Console; Section 7.2
  - Remedy
    - Using the Trouble Ticket System Tool; Section 8.2
      - Accessing the Trouble Ticket System; Section 8.2.1
        - Remedy's GUI Admin Tool[8]; Section 8.2.1.1
        - Remedy's GUI Import Tool[9]; Section 8.2.1.2
        - Remedy's Hardware Information Schema; Section 8.2.1.3
        - Remedy's GUI Notification Tool; Section 8.2.1.4
      - Submit a Trouble Ticket; Section 8.2.2
      - Reviewing and Modifying Open Trouble Tickets; Section 8.2.3
      - Forwarding Trouble Tickets; Section 8.2.4
      - Adding Users to Remedy[10]; Section 8.2.5
      - Changing Privileges[11]; Section 8.2.6
      - Modifying Configuration[12]; Section 8.2.7
      - Generating Trouble Ticket Reports[13]; Section 8.2.8
      - Re-Prioritization of Dated Trouble Ticket Logs[14]; Section 8.2.9
    - Using Hypertext Mark-up Language (HTML) Screens; Section 8.3
      - ECS Trouble Ticketing HTML Submit Screen; Section 8.3.1
      - ECS Trouble Ticketing HTML Success Screen; Section 8.3.2
      - ECS Trouble Ticketing HTML List Screen; Section 8.3.3
      - ECS Trouble Ticketing HTML Detailed Screen; Section 8.3.4
      - ECS Trouble Ticketing HTML Help Screen; Section 8.3.5
  - Clear Case
    - Science Software Configuration Management; Section 11.6
      - ClearCase Overview; Section 11.6.1
      - Creating a View in ClearCase; Section 11.6.2
        - Creating a View in ClearCase Using Command Lines; Section 11.6.2.1

[7] See System Administration (E-LC-11), Network
[8] For more information on the Admin Tool, refer to the Remedy Administration Manual.
[9] For more information on the Import tool, refer to the Remedy User Guide.
[10] See Remedy Administrator's Guide for OSF/ Motif, Chapter 3, "Setting Up Users and Groups", page 3-11, section on "Adding Users".
[11] For more information, refer to the Remedy Administrator's Guide.
[12] To modify the Remedy environmental variables, refer to the Remedy User's Guide and Remedy Administrator's Guide as indicated.
[13] See Remedy User's Guide
[14] See Remedy User's Guide

        - Creating a View in ClearCase using the File Browser Screen; Section 11.6.2.2
    - Setting a View in ClearCase; Section 11.6.3
        - Setting a View in ClearCase Using Command Lines; Section 11.6.3.1
        - Setting a View Using the File Browser Screen in ClearCase; Section 11.6.3.2
    - Creating a New Directory; Section 11.6.4
        - Creating a New Directory in ClearCase Using Command Lines; Section 11.6.4.1
    - Importing files into ClearCase; Section 11.6.5
        - Importing a Single File into ClearCase; Section 11.6.5.1
        - Importing Multiple Files into ClearCase; Section11.6.5.2
    - Checking Out a File From ClearCase; Section 11.6.6
    - Checking a Modified Element into ClearCase; Section 11.6.7
        - Checking a Modified Element/File into ClearCase; Section 11.6.7.1
- DDTS
    - Change Request Manager; Section 9.8
        - Accessing Change Request Manager; Section 9.8.2
        - View a CCR; Section 9.8.3
        - Submit a CCR; Section 9.8.4
        - Change State of CCR; Section 9.8.5
            - Assign-Eval State; Section 9.8.5.1
            - Assign-Implement State; Section 9.8.5.2
            - Assign-Verify State; Section 9.8.5.3
            - Verify State; Section 9.8.5.4
            - Close State; Section 9.8.5.5
        - Modify CCR; Section 9.8.6
        - Print CCR; Section 9.8.7
    - Reports[15]; Section 9.8.9
- XRP-II
    - Use of the Baseline Manager; Section 9.9
        - Procedures, Section 9.9.2
            - Getting Started; Section 9.9.2.1
            - Cataloging the Control Items; Section 9.9.2.2
                - All Control Items Screen; Section 9.9.2.2.1
                - Hardware Items Only Screen; Section 9.9.2.2.2
                - Software Items Only Screen; Section 9.9.2.2.3
                - Document Items Only Screen; Section 9.9.2.2.4
                - Host Items Only Screen; Section 9.9.2.2.5
                - Partition Items Only Screen; Section 9.9.2.2.6
            - Define/Update What Comprises Baselines and Other Control Item Assemblies; Section 9.9.2.3
                - Engineering Change Entry Screen; Section 9.9.2.3.1
                - Engineering Change Approval Screen; Section 9.9.2.3.2
            - Distribute Baseline Change Records for a Release; Section 9.9.2.4
            - Incorporate Release Records at a Site/SMC; Section 9.9.2.5
            - Provide Site Baseline Change Records to SMC; Section 9.9.2.6

[15] Reference Chapter 3 of the DDTS User's Manual (Setting PureDDTS Options) for information concerning the printing of a CCR report and a description of the available report formats.

        - Maintain Control Item Deployment Data; Section 9.9.2.7
        - Update Dependencies Among Control Items; Section 9.9.2.8
        - Query Control Item Records; Section 9.9.2.9
        - Generate Pre-Defined Reports; Section 9.9.2.10
        - Perform Baseline Management Master Files Maintenance; Section 9.9.2.11
        - Perform XRP-II Master Files Maintenance; Section 9.9.2.12
    - Setting Tunable Parameters; Section 9.9.3
    - Command Line Interface; Section 9.9.5
    - Outputs; Section 9.9.6
    - Event and Error Messages; Section 9.9.7
    - Reports; Section 9.9.8
        - Sample Reports; Section 9.9.8.1
        - Report Customization; Section 9.9.8.2
- E-mail Interface[16]
- Web Server Interface, *No applicable Section*

[16] See TCP/IP

Appendix A. - Requirements Matrix

REQ_ID	REQ_TEXT
DADS0010#B	Each DADS shall receive updated metadata for products that have been QA'd.
DADS0020#B	Each DADS shall, upon receipt of updated metadata for products which have been QA'd, store the metadata in its inventory.
DADS0120#B	Each DADS shall receive from the PGS, at a minimum, the following: a. L1-4 products b. (DELETED) c. Metadata d. Calibration e. Algorithms f. Schedule g. Status
DADS0130#B	Each DADS shall receive from the EDOS, at a minimum, the following: a. Production data (L0) b. Expedited data
DADS0250#B	Each DADS shall receive, at a minimum, data in the following forms: a. Physical electronic media b. Electronic communications network c. Hardcopy media
DADS0440#B	Each DADS shall provide storage, at a minimum, for the following EOS data: a. Standard Products b. Associated correlative data sets c. Associated ancillary data sets d. Associated calibration data sets e. Associated metadata f. Documents g. Algorithms h. Format descriptions (e.g., HDF spec.)
DADS0490#B	Each DADS shall archive Level 1B - Level 4 data products.
DADS0530#B	The DADS shall be capable of accepting from PGS requests for refined orbit data.
DADS0535#B	The DADS shall be capable of sending a request for refined orbit data to the FDF.
DADS0910#B	Each DADS shall notify the SMC and IMS in the event that data required in connection with an on-demand request does not arrive.
DADS1100#B	Each DADS shall maintain a log of all updates to the local inventory. The log shall be used to generate status reports and, in conjunction with the inventory backup, recreate the local inventory in the event of catastrophic failure.
DADS1450#B	Each DADS shall be capable of screening its archive holdings of Level 1A or Level 0 data, and if a product(s) is found to be lost or unreadable, generate a request for a replacement product from EDOS, dispatch the request, and ingest the replacement product.
DADS1472#B	Each DADS shall contain the appropriate capacity to respond to contingencies, scheduling problems, and peak loads.
DADS2070#B	Each DADS shall interact with EDOS and SMC to resolve schedule conflicts.
DADS2100#B	Each DADS shall receive time windows and priorities requested by the user for incorporation into and modification of its schedule.
DADS2110#B	The DADS shall provide scheduling information to the SMC.

REQ_ID	REQ_TEXT
DADS2120#B	The DADS shall have access to the system wide scheduling information. Such information includes, at a minimum, ESDIS Policies and Procedures regarding instrument and ground event scheduling, other element plans and schedules, element allocations of ground event functions and capabilities, product thread information, and scheduling directives for testing, maintenance, and emergency situations.
DADS2330#B	Each DADS shall send to the PGS, at a minimum, the following: a. Production data (L0) received from EDOS b. L0-L4 c. (DELETED) d. Metadata e. Ancillary data f. Calibration data g. Algorithms h. Schedules i. Status j. Spacecraft and instrument logs k. Special data sets l. Non-EOS science data from ADCs/ODCs
DADS2340#B	Each DADS shall send to remote DAACs, at a minimum, the following: a. L0-L4 b. Metadata c. Ancillary data d. Calibration data e. Correlative data f. Documents g. Algorithms h. Spacecraft and instrument logs
DADS2370#B	Each DADS shall send to the user, at a minimum, the following: a. L0-L4 b. Special products (L1-L4) c. Metadata d. Ancillary data e. Calibration data f. Correlative data g. Documents h. Algorithms i. Planning and scheduling information
DADS2440#B	Each DADS shall distribute data under a multi-level priority system. For example: a. Expedited data b. QA data c. Data products requested by standing order d. Data products requested retrospectively
DADS2490#B	Each DADS shall distribute data using a variety of approved high density storage media such as : a. 8 mm tape b. 4 mm DAT c. 3480/3490 tape d. CD ROM e. 6250 tape
DADS2510#B	Each DADS shall copy data to the class of physical media specified in the product order from the IMS.

REQ_ID	REQ_TEXT
DADS2530#B	The DADS shall be capable of distributing by physical media to meet user demand.
DADS2580#B	Each DADS shall distribute data electronically using a variety of networks and methods including FAX.
EGS_4.3.3.1	The GSFC DAAC shall provide the capability to initiate transfer of the PDS/EDS Acceptance Notification to EDOS within a time period of 15 minutes plus an additional 15 minutes for each gigabyte of EDS data, after successful receipt of the PDS/EDS Delivery Record from EDOS.
EGS_4.3.3.2	The GSFC DAAC shall provide the capability to initiate transfer of the PDS/EDS Acceptance Notification to EDOS within a time period of 15 minutes plus an additional 15 minutes for each gigabyte of PDS data, after successful receipt of the PDS/EDS Delivery Record from EDOS.
EOSD0020#B	ECS shall use and support the EDOS/EBnet interface to obtain the data capture, data archival, and data distribution services needed to achieve full end-to-end ECS functionality.
EOSD0030#B	ECS shall, during its lifetime, ingest, archive distribute and provide search and access for Landsat 7 (including IGS metadata and browse) and related non-EOS data and products.
ESN-1180#B	The ESN shall interoperate with NSI to provide user access to ECS.
IMS-0040#B	The IMS shall verify user authorization by validation of inputs with information as supplied by the SMC.
IMS-0100#B	The IMS shall support, at a minimum: a. Interactive sessions b. Non-interactive remote sessions c. Client-server interface d. Simulated sessions for training purposes
IMS-0160#B	The IMS shall provide levels of user interaction support to include at a minimum: a. Expert (e.g., quick command driven direct information input) b. Intermediate (e.g., some prompting and automatically supplied help) c. Novice (e.g., extensive prompting and help facilities)
IMS-0210#B	The IMS shall allow data access privileges to be configurable by user and data type for: a. Read b. Write c. Update d. Delete e. Any combination of the above
IMS-0230#B	The IMS shall restrict update of ECS directory, inventory, and guide (documentation/reference material) and other IMS data bases to authorized users based on the users access privileges.
IMS-0450#B	The IMS shall accept and validate new and updated metadata for all ECS archive data which has been ingested at the DADS.
IMS-0510#B	The IMS shall provide tools for research planning and data search, to include at a minimum: a. Data acquisition schedules and plans b. The capability to map specified geophysical parameters to the appropriate instrument and/or Standard Product c. Descriptive information on instruments and geophysical parameters available in Standard Products d. Climatology information e. Phenomenology information f. Geographic reference aids g. Spacecraft location projections.

REQ_ID	REQ_TEXT
IMS-0890#B	The IMS shall provide the capability to receive the metadata from the DADS when ADC or ODC data has been ingested into the ECS archives.
IMS-0910#B	The IMS shall provide the capability to receive the metadata from the DADS, when IP data has been ingested into the EOSDIS archives.
IMS-1080#B	The IMS shall accept requests for acquisition of data to be processed one time or as standing orders.
NI-0360#B	ECS shall have the capability to send a notification of orbitquality checks and request updated (refined/repaired) orbit data from the FDF when necessary. Mission-specific requirements for FDF support of EOS missions will be documented in the EOS mission-level Detailed Mission Requirements documents and FDF-developed ICDs.
NI-0365#B	ECS shall have the capability to receive from FDF orbit and attitudequality checking software and parameter. Mission-specific requirements for FDF support of EOS missions will be documented in the EOS mission-level Detailed Mission Requirements documents and FDF-developed ICDs.
NI-0370#B	ECS shall have the capability to receive from FDF, at a minimum the following: a. Orbit data and associated metadata b. Attitude data and associated metadata Mission-specific requirements for FDF support of EOS missions will be documented in the EOS mission-level Detailed Mission Requirements documents and FDF-developed ICDs.
PGS-0165#B	The PGS shall accept priority processing requests from the IMS.
PGS-0180#B	The PGS shall receive a notice from DADS when data that it has received is available.
PGS-0250#B	The PGS shall schedule product generation when all inputs required to generate a Standard Product for which there is a current order (from IMS) are available. Entries in the schedule shall contain, at a minimum: a. The product to be generated b. The specific algorithm(s) and calibration coefficients to be used c. The specific data sets needed and their sizes d. Priorities and deadlines that apply to the order for the product
PGS-0270#B	The PGS shall provide the capability to perform the following functions, at a minimum: a. Allocate tasks among processors b. Suspend execution of tasks c. Resume execution of a suspended task d. Cancel execution of tasks e. Request and verify the staging and/or destaging of data stored in the DADS
PGS-0360#B	The PGS shall generate a PGS processing log that accounts for all data processing activities.
PGS-0410#B	The PGS shall have the capability to track the processing status of all products scheduled to be generated.
PGS-0456#B	The PGS shall notify the FDF, via the DADS, of orbitquality checks and request updated orbit data from the FDF when necessary.
PGS-0457#B	The PGS shall use subroutines provided by the Flight Dynamics Facility to repair orbit and attitude data when necessary
PGS-0490#B	The PGS shall have the capability to access and use, for the generation of Standard Products, information such as: a. Digital terrain map databases b. Land/sea databases c. Climatology databases d. Digital political map databases

REQ_ID	REQ_TEXT
PGS-0500#B	The PGS shall have the capability to generate Level 1 through 4 Standard Products using validated algorithms and calibration coefficients provided by the scientists.
PGS-0510#B	The PGS shall have the capability to generate metadata (see Appendix C) according to the algorithms provided by the scientists and associate this metadata with each Standard Product generated.
PGS-0560#B	The PGS shall maintain copies of generated products to be used as inputs to other scheduled products for processing efficiency.
PGS-0590#B	The PGS shall have the capability to indicate the temporary status of data stored in the DADS that is awaiting QA or human interaction in product production.
PGS-1050#B	The PGS shall provide the capability to perform both automatic and manual QA of generated products.
PGS-1060#B	The PGS shall have the capability to perform automatic QA of generated products utilizing algorithms provided by the scientists.
PGS-1080#B	The PGS shall have the capability to provide an inventory and review copy of generated products to the data productquality staff before the product is sent to the DADS for storage.
PGS-1090#B	The PGS shall have the capability to provide the data product quality staff with the algorithms, calibration coefficient tables, input data sets, or other information related to product processing for the purpose of reviewing and analyzing the quality of production.
PGS-1100#B	The PGS shall have the capability to accept product quality data input.
PGS-1110#B	The PGS shall have the capability to associate data quality with a generated product.
PGS-1120#B	The PGS shall send the DADS updated metadata provided by the data product ity staff relating to product QA review. This QA review metadata shall contain the following information at a minimum. a. Product ID b. QA Approval field c. Other metadata
PGS-1130#B	The PGS shall receive product QA from the SCF which shall describe the results of the scientist's productquality review at an SCF. Product QA shall contain the following information at a minimum: a. Identification of product b. QA results c. Product storage and processing instructions
PGS-1140#B	The PGS shall have the capability to provide the data productquality staff with the Product QA data from the SCF.
PGS-1170#B	The PGS shall have the capability to identify data products awaiting QA that have not been reviewed within the amount of time allocated for QA.
PGS-1175#B	The PGS shall maintain a list of products requiring QA by SCF or the PGS.
PGS-1180#B	The PGS shall have the capability to update the processing status of a given product as a result of a QA timeout.
SCF-0200#B	The ECS shall have the capability to receive from the SCF a QA Notification Specification. This specification, submitted by the scientist at the SCF, describes the conditions under which data should be forwarded to the SCF for QA.
SCF-0210#B	The ECS shall have the capability to send a Dataquality Request Notification to the SCF. This notification is sent when QA notification criteria are met during routine ECS processing. The notification states the data product and the time by which a notification, and optionally data, must be evaluated and returned to the ECS for inclusion as an update to the product metadata.

REQ_ID	REQ_TEXT
SCF-0220#B	The ECS shall have the capability to receive from the SCF a Request for Data to QA. This request may be a standing request specified in the QA Notification Specification and may include the data product specified in the Dataquality Request Notification, or other data required by the scientist to QA the data product.
SCF-0230#B	The ECS shall have the capability to send Data Delivered for QA to the SCF. This data includes the data requested by the scientist needed for the QA of data products.
SCF-0240#B	The ECS shall have the capability to receive an On Time QA from the SCF. This shall consist of the science QA codes describing the results of product QA and any further instructions to the ECS. The ECS shall accept the On Time QA when it is received within the time-out period specified in the Dataquality Request Notification. ECS shall accept post-time-out QA updates as Metadata Updates as specified by Requirement SCF-0250.
SCF-0250#B	The ECS shall have the capability to receive Metadata Updates from the SCF. These shall include the science QA codes and optionally a report describing the results of product QA and any further instructions to the ECS. The ECS shall only accept Metadata Updates when they are received after the time allotment specified in the Dataquality Request Notification.
SDPS0015#B	The SDPS shall receive directives on priorities and policy, including schedule conflict resolutions, from the SMC.
SDPS0016#B	The SDPS shall coordinate and resolve schedule conflicts between IMS, DADS and PGS.
SDPS0020#B	The SDPS shall receive EOS science, engineering, ancillary and expedited data from the EDOS and the IPs, and non-EOS data, in situ data, associated algorithms, documentation, correlative data, and ancillary data (as listed in Appendix C) from ADCs, EPDSs, and ODCs.
SDPS0050#B	The SDPS shall archive, manage,quality check, and account for the generated data products, and distribute the data products to the appropriate destinations as required.
SDPS0130#B	The SDPS shall provide the capability for DAACs to exchange data products, browse data, metadata, dataquality information, research results, and documentation.
SMC-1330#B	The SMC shall support and maintain the information for end-to-end data ingest, processing, reprocessing, archive, and data distribution for each product, including, at a minimum: a. Product information b. Product generation information c. Product delivery information
SMC-1345#B	The LSM shall perform priority management services to resolve conflicts for ECS resources.
SMC-3350#B	The SMC shall generate, maintain, and update performance criteria and responses to performance deficiencies for system, site, and element resources and activities, such as: a. Data collection b. Product generation, QA and validation c. Reprocessing d. Data delivery to DAACs and to users e. Response to user requests f. Response to TOOs g. Response to field experiments h. Response to emergency situations

OPS Rehearsal Scenarios

The OPS Rehearsal scenarios for a day in the life of the EDC DAAC time matrix which are shown in the pages following require some explanation. The time matrix is based on the OPS Rehearsal Certification test plans, the EGS series of tests, which will be performed on the EDC DAAC at Launch minus thirty days.

The following clarifications are offered in order to provide some insight into the time matrix chart.

1. Column 2, Task/Activity/Operation, provides the name of the action and the EGS test document which applies to the action.
2. Column 3, Scenario and Number of Operations/day, contains a estimate of the number of actions anticipated during the course of a day and also lists the DAAC launch critical or launch essential scenario that the test will be run under.
3. Column 4+ are divided into hours and the shaded areas represent the time during which the action will be conducted and the width of the shaded area is the expected time that it will take to run the action to completion. The difference in shaded areas are for ease in reading the diagram and do not signify any other function.
4. For items number 11 through 11f, these are COTS products and the intention here is to verify the correct operation of the COTS product. This action will only be done once and is not part of the daily operations of the DAAC.
5. For items 12 through 32 deal with catalog interoperability. The number of requests per hour is estimated at twenty for this action. It is assumed that requests in this area will be on going and will be anywhere from one to many per hour. It is assumed for the test that twenty in one hour will be performed and that other requests will be randomly scattered throughout the twenty four hour period.

For items where the text is “Italic”, these items are not expected to be available until Launch + 4 months.

#	Task/Activity/Operation	Scenario and Number of operations/day[1]	24 Hour Operations Period																							
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	System start-up or re-start **E-EGS10.1**	Once or as needed **E-LC-11**																								
2	System Shutdown **E-EGS10.1**	Once or as required **E-LC-11**																								
3	DCE Cell Management **E-EGS10.1**	On Start up verify DCE operation **E-LC-11**																								
4	Ingest of Data **E-EGS10.2**	Daily operation **E-LC-4, 6, 13**																								
4a	ASTER Ingest **E-EGS9**																									
4b	ASTER GDS sends DSN **E-EGS9.1**	N/A **E-LC-8**																								
4c	ASTER GDS ships D3 tapes **E-EGS9.1**	24 hours of data **E-LC-8**																								
4d	Level 1 tapes received **E-EGS9.1**	N/A **E-LC-8**																								
4e	DSN checked against tapes **E-EGS9.1**	**E-LC-8**																								
4f	ASTER L1a/L1b Ingest **E-EGS9.1**	Once/day **E-LC-8**																								
4g	ASTER L1a/L1b Archive **E-EGS9.1**	Once/Day **E-LC-8**																								
4h	ASTER SSI&T **E-EGS9.2**	As New or updated PGEs received **E-LC-9, 12**																								
4i	Mode Management **E-EGS10.3**	Checked while running SSI&T and operations **E-LC-12, 13**																								
4j	ESDT Addition and Distribution **E-EGS10.3**	Distributed after SSI&T **E-LC-12, 13**																								
4k	Distribution of ASTER L1a/1b to ITs **E-EGS9.3**	As Required **E-LC-14**																								
4l	*ASTER L2/L3 Processing* ***E-EGS9.7***	*On Demand* ***E-LE-9, 12***																								

#	Task/Activity/Operation	Scenario and Number of operations/day[1]	24 Hour Operations Period																							
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
4m	*ASTER L2/L3 Archive* ***E-EGS9.7***	*On Demand* ***E-LC-9, 12***																								
4aa	Landsat 7 Ingest **E-EGS5**																									
4bb	LPS to EDAAC Ingest & Archive **E-EGS5.02**	Every 2 hours LOR data **E-LC-1**																								
4cc	IGS to EDAAC **E-EGS5.03**	Metadata updates **E-LC-5**																								
4dd	IAS to EDAAC to IAS E-EGS5.04	Calibration parameter file transfer. **E-LC-7**																								
4ee	MMO and EDAAC transfers **E-EGS5.05**	MMO reports and product price information **E-LE-13**																								
4ff	Landsat 7 and ECS Advertising Service **E-EGS5.06**	Inventory metadata made available to users **E-LC3, 4**																								
4gg	MOC to EDAAC **E-EGS5.07**	Engineering data exchange. **E-LE-4**																								
4aa'	*MODIS 2G Ingest* ***E-EGS10.2***																									
4bb'	*MODIS 2G Ingest* ***E-EGS10.2***	*Ingest MODIS 2G data from GDAAC* ***E-LC-4, 6, 13***																								
4cc'	*Archive MODIS 2G* ***Data E****-EGS10.2*	*Archiving of 2G products* ***E-LC-4, 6, 13***																								
4dd'	MODIS SSI&T **E-EGS10.3**	As new or updated PGEs are received **E-LC-12, 13**																								
4ee'	Mode Management **E-EGS10.3**	Checked while running SSI&T and operations **E-LC-12, 13**																								
4ff'	ESDT Addition and Distribution **E-EGS10.3**	Distributed after SSI&T **E-LC-12, 13**																								
5	TCP/IP	e-mails and distribution																								

#	Task/Activity/Operation	Scenario and Number of operations/day[1]	24 Hour Operations Period																							
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	E-EGS10.4	of data **E-LC-11, 16**																								
6	Resource Planning E-EGS10.4	Production Planning **E-LC-11, 16**																								
7	System Backup and Restore **E-EGS10.4**	As Required **E-LC-11,16**																								
8	Management of UNIX Users Accounts **E-EGS10.4**	As Required **E-LC-11,16**																								
9	Error Logs **E-EGS10.4**	As Required **E-LC-11,16**																								
10	Network operations **E-EGS10.4**	As Required **E-LC-11,16**																								
11	COTS Management **E-EGS10.4**	As Required **E-LC-11,16**																								
11a	HP Open View **E-EGS10.4**	Once per test **E-LC-11,16**																								
11b	Tivoli **E-EGS10.4**	Once per test **E-LC-11,16**																								
11c	Remedy **E-EGS10.4**	Once per test **E-LC-11,16**																								
11d	Clear Case **E-EGS10.4**	Once per test **E-LC-11,16**																								
11e	DDTS **E-EGS10.4**	Once per test **E-LC-11,16**																								
11f	XRP-II **E-EGS10.4**	Once per test **E-LC-11,16**																								
12	ASTER Catalog Interoperability **E-EGS9.4**	As Many as 20 or more per hour **E-LC-2, 3**																								
13	Ingest ASTER GDS valids **E-EGS9.4**	As Many as 20 or more per hour **E-LC-2, 3**																								
14	*Submit a Inventory Search* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								
15	*Receive Inventory Search Results* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								

#	Task/Activity/Operation	Scenario and Number of operations/day[1]	24 Hour Operations Period																							
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
16	*Submit Integrated Browse Request* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								
17	*Receive Integrated Browse Request Results* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								
18	*Receive Browse Image for each product* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								
19	*Submit a Product Order Request* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								
20	*Submit a query on Product Status* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								
21	*Submit a single granule Browse Request* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								
22	*Receive a single granule Browse results message* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								
23	*Receive the single granule image* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								
24	*Submit a cancel product request* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								
25	*Receive Product Cancel result* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								
26	*Submit a request for product price estimate information* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								
27	*Receive Price estimate results* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								
28	*Request an update to a product request.* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								
29	*Receive the Product Update Results* ***E-EGS9.4***	*As Many as 20 or more per hour* ***E-LC-2, 3***																								
30	Order a Product **E-EGS9.4**	As Many as 20 or more per hour **E-LC-2, 3**																								
31	Receive Product Result message **E-EGS9.4**	As Many as 20 or more per hour **E-LC-2, 3**																								
32	Receive Product tape **E-EGS9.4**	As Many as 20 or more per hour **E-LC-2, 3**																								
33	Submit a DAR Acquisition	Possible one or two																								

#	Task/Activity/Operation	Scenario and Number of operations/day[1]	24 Hour Operations Period																						
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Request **E-EGS9.5**	requests per day **E-LC-6**																								
34	Receive confirmation and XAR ID from ASTER GDS **E-EGS9.5**	Possible one or two requests per day **E-LC-6**																								
35	Submit a XAR Modify Request **E-EGS9.5**	Possible one or two requests per day **E-LC-6**																								
36	Receive the revised status request from ASTER GDS **E-EGS9.5**	Possible one or two requests per day **E-LC-6**																								
37	Submit a XAR Status Search **E-EGS9.5**	Possible one or two requests per day **E-LC-6**																								
38	Receive XAR Status Results **E-EGS9.5**	Possible one or two requests per day **E-LC-6**																								
39	Submit XAR Contents E-Request **E-EGS9.5**	Possible one or two requests per day **E-LC-6**																								
49	Receive XAR Contents retrieval results **E-EGS9.5**	Possible one or two requests per day **E-LC-6**																								
41	Submit Sub-XAR status search request **E-EGS9.5**	Possible one or two requests per day **E-LC-6**																								
42	Receive Sub-XAR status search Results **E-EGS9.5**	Possible one or two requests per day **E-LC-6**																								